

89/043171 #4



ABSTRACT OF THE DISCLOSURE

A synthesizer is disclosed in which a speech waveform is synthesized by selecting a synthetic starting waveform segment and then generating a sequence of further segments. The further waveform segments are generated based jointly upon the value of the immediately-
5 preceding segment and upon a model of the dynamics of an actual sound similar to that being generated. In particular, a method is disclosed of a voiced speech sound comprising calculating each new output value from the previous output value using data modeling the evolution, over a short time interval, of the voiced speech sound to be synthesized. This
10 sequential generation of waveform segments enables a synthesized sequence of speech waveforms to be generated of any duration. In addition, a low-dimensional state space representation of speech signals are used in which successive pitch pulse cycles are superimposed to estimate the progression of the cyclic speech signal within each cycle.

RECEIVED
APR 25 2000
TC 2700 MAIL ROOM